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NEWS 17 OCT 30 CHEMLIST enhanced with new search and display field  
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NEWS 21 NOV 20 CAS Registry Number crossover limit increased to 300,000 in  
additional databases  
NEWS 22 NOV 20 CA/CAplus to MARPAT accession number crossover limit increased  
to 50,000  
NEWS 23 DEC 01 CAS REGISTRY updated with new ambiguity codes  
NEWS 24 DEC 11 CAS REGISTRY chemical nomenclature enhanced  
NEWS 25 DEC 14 WPIDS/WPINDEX/WPIX manual codes updated  
NEWS 26 DEC 14 GBFULL and FRFULL enhanced with IPC 8 features and  
functionality  
NEWS 27 DEC 18 CA/CAplus pre-1967 chemical substance index entries enhanced  
with preparation role  
NEWS 28 DEC 18 CA/CAplus patent kind codes updated  
NEWS 29 DEC 18 MARPAT to CA/CAplus accession number crossover limit increased  
to 50,000  
NEWS 30 DEC 18 MEDLINE updated in preparation for 2007 reload  
NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
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=> s oxonol

L1 985 OXONOL

=> s ((two or multi or three or bi)(4w)photon?) or biphoton? or multiphoton?

L2 76352 ((TWO OR MULTI OR THREE OR BI)(4W) PHOTON?) OR BIPHOTON? OR MULTIPHOTON?

=> s l1 and l2

L3 6 L1 AND L2

=> d all 1-6

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1085901 CAPLUS <<LOGINID::20061218>>

DN 145:183541

ED Entered STN: 10 Oct 2005

TI New tool to monitor membrane potential by FRET voltage sensitive dye (FRET-VSD) using spectral and fluorescence lifetime imaging microscopy

AU Dumas, D.; Stoltz, J.-F.

CS Laboratoire de Mecanique et Ingenierie Cellulaire et Tissulaire, UMR CNRS 7563 LEMTA et IFR 111 CNRS -UHP-INPL-CHU, Vandoeuvre le's Nancy, 54505, Fr.

SO Clinical Hemorheology and Microcirculation (2005), 33(3), 293-302

CODEN: CHMIFQ; ISSN: 1386-0291

PB IOS Press

DT Journal

LA English

CC 9-16 (Biochemical Methods)

Section cross-reference(s): 14

AB In this work, we investigated a voltage-sensitive fluorescent system to monitor membrane potential by spectral and lifetime fluorescence microscopy. A two-component FRET sensor has been designed that utilizes fluorescent phospholipids acceptor (DHPE-TRITC) bound on one side of the membrane and donor mols. ( \*\*\*oxonol\*\*\* ) which are sensitive to membrane potential. We used \*\*\*multiphoton\*\*\* excitation and FLIM to deliver contrast lifetimes of different line cancerous cells. These results provide new information concerning the differential response to depolarized cancerous cells from resting cells when compared to fibroblast normal cells. Given the sensitivity and the fast time response, this FRET system may be particularly useful for applications involving compression of tissues by mech. forces.

ST cell membrane elec potential fluorescent dye spectroscopy FLIM carcinoma

IT Electric potential

Membrane potential

(biol.; new tool for membrane potential monitoring by FRET voltage sensitive dye using spectral and fluorescence lifetime imaging microscopy)

IT Imaging agents

(contrast; new tool for membrane potential monitoring by FRET voltage sensitive dye using spectral and fluorescence lifetime imaging

microscopy)

IT Imaging  
(fluorescent; new tool for membrane potential monitoring by FRET  
voltage sensitive dye using spectral and fluorescence lifetime imaging  
microscopy)

IT Photoexcitation  
( \*\*\*multiphoton\*\*\* ; new tool for membrane potential monitoring by  
FRET voltage sensitive dye using spectral and fluorescence lifetime  
imaging microscopy)

IT Biosensors  
Carcinoma  
Cell membrane  
Diagnosis  
Fluorescence resonance energy transfer  
Fluorescent dyes  
Spectroscopy  
(new tool for membrane potential monitoring by FRET voltage sensitive  
dye using spectral and fluorescence lifetime imaging microscopy)

IT Phospholipids, analysis  
RL: ARU (Analytical role, unclassified); BUU (Biological use,  
unclassified); ANST (Analytical study); BIOL (Biological study); USES  
(Uses)  
(new tool for membrane potential monitoring by FRET voltage sensitive  
dye using spectral and fluorescence lifetime imaging microscopy)

IT Fluorescence microscopy  
(time-resolved; new tool for membrane potential monitoring by FRET  
voltage sensitive dye using spectral and fluorescence lifetime imaging  
microscopy)

IT 70363-83-6, Bis-(1,3-dibutylbarbituric acid)trimethine \*\*\*oxonol\*\*\*  
176181-90-1, Tritc-dhpe  
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST  
(Analytical study); BIOL (Biological study); USES (Uses)  
(new tool for membrane potential monitoring by FRET voltage sensitive  
dye using spectral and fluorescence lifetime imaging microscopy)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bechem, M; Electrochimica Acta 2003, V48, P3387 CAPLUS
- (2) Cacciatore, T; Neuron 1999, V23, P449 CAPLUS
- (3) Dumas, D; Biorheology 2003, V40, P253 MEDLINE
- (4) Dumas, D; Biorheology 2004, V41, P459 CAPLUS
- (5) D'all'Asta, V; Experimental Cell Research 1997, V231, P260 CAPLUS
- (6) Epps, D; Chemistry and Physics of Lipids 1994, V69(2), P137 CAPLUS
- (7) Gonzalez, J; Chem Biol 1997, V4, P269 CAPLUS
- (8) Holoubek, A; Biochimica et Biophysica Acta 2006, V1609, P71
- (9) Klonis, N; Analytical Biochemistry 2003, V317, P47 CAPLUS
- (10) Milward-Sadler, S; Osteoarthritis and Cartilage 2000, V8, P272
- (11) Miyawaki, A; Current Opinion in Neurobiology 2003, V13, P591 CAPLUS
- (12) Sanchez, J; Comparative Biochemistry and Physiology Part A 2003, V135,  
P575 MEDLINE
- (13) Sholam, D; Neuron 1999, V24, P791

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:632427 CAPLUS <<LOGINID::20061218>>

DN 143:162740

ED Entered STN: 21 Jul 2005

TI High-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing  
organic materials and their applications

IN Akiba, Masaharu; Tani, Takeharu; Morinaga, Naoki; Takizawa, Hiroo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 69 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02F001-361

ICS C08K005-00; C08L101-00; C09K011-06; G11B007-24; C09B023-00

CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related  
Properties)

Section cross-reference(s): 27, 38, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005195922	A	20050721	JP 2004-2743	20040108

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005195922	ICM	G02F001-361
	ICS	C08K005-00; C08L101-00; C09K011-06; G11B007-24; C09B023-00
	IPCI	G02F0001-361 [ICM,7]; G02F0001-35 [ICM,7,C*]; C08K0005-00 [ICS,7]; C08L0101-00 [ICS,7]; C09K0011-06 [ICS,7]; G11B0007-24 [ICS,7]; C09B0023-00 [ICS,7]
	IPCR	C08K0005-00 [I,A]; C08K0005-00 [I,C*]; C08L0101-00 [I,A]; C08L0101-00 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; G02F0001-35 [I,C*]; G02F0001-361 [I,A]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	2K002/AB12; 2K002/BA01; 2K002/CA05; 2K002/HA13; 4H056/CA02; 4H056/CA04; 4H056/CA05; 4H056/CB01; 4H056/CB06; 4H056/CC02; 4H056/CC08; 4H056/CD05; 4H056/CD08; 4H056/CE02; 4H056/CE03; 4H056/CE06; 4H056/CE07; 4H056/DD03; 4H056/DD07; 4H056/DD19; 4H056/DD22; 4H056/DD29; 4H056/FA06; 4H056/FA10; 4J002/BC031; 4J002/BC091; 4J002/BG011; 4J002/BG041; 4J002/BG051; 4J002/BG061; 4J002/BG071; 4J002/BG131; 4J002/BH021; 4J002/ET006; 4J002/EU116; 4J002/EU226; 4J002/EV326; 4J002/FD096; 5D029/JA04

OS MARPAT 143:162740

AB The materials contain TPAD1L(TPAD2)n (I; TPAD1, TPAD2 = group contg. nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing chromophore; L = linkage, single bond, atom; n = 1-7). Preferably, the TPAD1 and TPAD2 are cyanine dyes, streptocyanine dyes, merocyanine dyes, \*\*\*oxonol\*\*\* dyes, stilbazolium dye, or groups contg. X2(CR4:CR3)mC:Y(CR1:CR2)nX1 [R1-R4 = H, substituent: Y = O, at. group contg. CN, COMe, SO2, etc.; X1, X2 = aryl, heterocyclyl, 5- or 6-membered azacyclic group (structure given); m, n = 0-4; m = n .noteq. 0;]. The materials are useful for luminescent materials, polymerizable compns., optical recording materials, and image forming materials, which are irradiated with laser at wavelength longer than linear absorption band of I in actual use.

ST nonresonant \*\*\*two\*\*\* \*\*\*photon\*\*\* absorbing org material  
luminescence; optical recording nonresonant \*\*\*two\*\*\* \*\*\*photon\*\*\*  
absorbing org material; polymn nonresonant \*\*\*two\*\*\* \*\*\*photon\*\*\*  
absorbing org material; laser imaging nonresonant \*\*\*two\*\*\*  
\*\*\*photon\*\*\* absorbing org material

IT Luminescent substances  
Nonlinear optical materials  
Optical recording materials  
\*\*\*Two\*\*\* - \*\*\*photon\*\*\* absorption  
(high-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing  
org. materials for luminescent materials, polymerizable compns.,  
optical recording materials, and image forming materials)

IT Luminescence  
(laser-induced; high-efficiency nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* -absorbing org. materials for luminescent materials,  
polymerizable compns., optical recording materials, and image forming  
materials)

IT Imaging  
Optical recording  
(laser; high-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\*  
-absorbing org. materials for luminescent materials, polymerizable  
compns., optical recording materials, and image forming materials)

IT Polymerization  
(radiochem., laser-induced; high-efficiency nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* -absorbing org. materials for luminescent materials,  
polymerizable compns., optical recording materials, and image forming  
materials)

IT 718636-51-2P 859500-47-3P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)

(high-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing  
org. materials for luminescent materials, polymerizable compns.,  
optical recording materials, and image forming materials)

IT 859500-49-5P 859500-50-8P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material)

use); PREP (Preparation); USES (Uses)  
(high-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing  
org. materials for luminescent materials, polymerizable compns.,  
optical recording materials, and image forming materials)  
IT 120-92-3D, Cyclopentanone, cyclopentanone 123-31-9, Hydroquinone,  
reactions 694-83-7, 1,2-Cyclohexanediamine 681836-46-4 859500-48-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(high-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing  
org. materials for luminescent materials, polymerizable compns.,  
optical recording materials, and image forming materials)  
IT 859500-51-9 859500-52-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(high-efficiency nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing  
org. materials for luminescent materials, polymerizable compns.,  
optical recording materials, and image forming materials)

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:323314 CAPLUS <<LOGINID::20061218>>  
DN 142:400655  
ED Entered STN: 15 Apr 2005  
TI Method and material for recording volume phase-type hologram  
IN Takizawa, Hiroo  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 50 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03H001-04  
ICS G03F007-004; G03H001-02; G11B007-0065  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005099416	A	20050414	JP 2003-332938	20030925
PRAI	JP 2003-332938		20030925		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005099416	ICM	G03H001-04
	ICS	G03F007-004; G03H001-02; G11B007-0065
	IPCI	G03H0001-04 [ICM,7]; G03F0007-004 [ICS,7]; G03H0001-02 [ICS,7]; G11B0007-0065 [ICS,7]; G11B0007-00 [ICS,7,C*]
	IPCR	G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03H0001-02 [I,A]; G03H0001-02 [I,C*]; G03H0001-04 [I,A]; G03H0001-04 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0065 [I,A]
	FTERM	2H025/AA00; 2H025/AB14; 2H025/AC08; 2H025/AD01; 2H025/BH05; 2H025/CA00; 2H025/CC15; 2K008/AA04; 2K008/BB05; 2K008/DD13; 2K008/EE07; 2K008/FF17; 2K008/HH01; 2K008/HH06; 2K008/HH13; 2K008/HH18; 5D090/BB16

OS MARPAT 142:400655

AB Disclosed is a process for forming a hologram using \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* absorption. A 2-photon absorption compd. may include a  
(mero)cyanine dye, an \*\*\*oxonol\*\*\* dye, a phthalocyanine dye, an azo  
dye, and a dye represented by X2(R4C=CR3)mCO(R1C=CR2)nX1 (R1-4 = H,  
substituent; n, m = 0-4; and X1,2 = aryl, heterocyclyl, etc.).

ST recording vol phase hologram holog; merocyanine cyanine \*\*\*oxonol\*\*\*  
phthalocyanin azo dye

IT Azo dyes  
Cyanine dyes  
Holography

\*\*\*Two\*\*\* - \*\*\*photon\*\*\* absorption  
( \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption material for vol. phase-type  
holog. recording)

IT 78902-42-8 111545-69-8 114750-15-1 217793-15-2 308116-42-9  
500905-67-9 680232-68-2 680232-71-7 680232-73-9 680232-75-1  
680232-77-3 680232-79-5 681836-47-5 718636-63-6 816453-41-5  
835628-33-6 835628-34-7 849792-43-4 849792-45-6

RL: EPR (Engineering process); NUU (Other use, unclassified); PEP

(Physical, engineering or chemical process); PROC (Process); USES (Uses)  
( \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption material for vol. phase-type  
holog. recording)

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:302558 CAPLUS <<LOGINID::20061218>>

DN 142:382269

ED Entered STN: 08 Apr 2005

TI \*\*\*Two\*\*\* - \*\*\*photon\*\*\* absorption optical recording material and  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption optical recording method

IN Takizawa, Hiroo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 84 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03C001-72

ICS G02F001-13; G02F001-35; G02F001-361; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 41, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005092074	A	20050407	JP 2003-328273	20030919
PRAI	JP 2003-328273		20030919		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005092074	ICM	G03C001-72
	ICS	G02F001-13; G02F001-35; G02F001-361; G11B007-24
	IPCI	G03C0001-72 [ICM,7]; G02F0001-13 [ICS,7]; G02F0001-35 [ICS,7]; G02F0001-361 [ICS,7]; G11B0007-24 [ICS,7]
	IPCR	G02F0001-13 [I,A]; G02F0001-13 [I,C*]; G02F0001-35 [I,A]; G02F0001-35 [I,C*]; G02F0001-361 [I,A]; G03C0001-72 [I,A]; G03C0001-72 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	2H088/EA62; 2H088/GA06; 2H088/GA12; 2H088/GA15; 2H088/JA26; 2H088/MA20; 2H123/AA00; 2H123/AA02; 2H123/AA03; 2H123/AA04; 2H123/AA05; 2H123/AA08; 2H123/AA09; 2H123/AA12; 2H123/AA19; 2H123/AA51; 2H123/AA60; 2H123/AE00; 2H123/AE01; 2K002/AA05; 2K002/AB29; 2K002/BA02; 2K002/CA06; 2K002/CA14; 2K002/HA22; 5D029/JA04

OS MARPAT 142:382269

AB Disclosed is a process of altering an orientation of a compd. with a characteristic birefringence using 2-photon absorption and chem. fixing the orientation, thereby recording information as a refractive index modulation in a nonrewritable manner. A 2-photon absorption compd. may be a cyanine dye merocyanine dye, an \*\*\*oxonol\*\*\* dye, a phthalocyanine dye, or a compd. represented by X2-(R4C=CR3)mCO(R1C=CR2)nX1 (R1-4 = H, substituent; m, n = 0-4; and X1,2 = aryl, heterocyclyl, etc.).

ST \*\*\*two\*\*\* \*\*\*photon\*\*\* absorption optical recording; cyanine merocyanine \*\*\*oxonol\*\*\* dye phthalocyanine

IT Optical recording materials

(nonrewritable; prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption compd. for optical recording material)

IT Cyanine dyes

Optical recording

\*\*\*Two\*\*\* - \*\*\*photon\*\*\* absorption (prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption compd. for optical recording material)

IT 574-93-6D, Phthalocyanine, deriv.

RL: DEV (Device component use); USES (Uses)

(prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption compd. for optical recording material)

IT 681836-47-5P 718636-60-3P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP

(Preparation); USES (Uses)

(prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption compd. for optical recording material)

IT 120-92-3, Cyclopentanone 927-63-9 4637-24-5 88253-66-1 165547-54-6

398522-14-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption compd. for optical recording material)

IT 88340-89-0P 681836-46-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption compd. for optical recording material)

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:1058477 CAPLUS <<LOGINID::20061218>>

DN 142:45976

ED Entered STN: 10 Dec 2004

TI Polymerizable compositions showing nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* absorption and method for three-dimensional refractive index modulation of them and optical recording therewith

IN Takizawa, Hiroo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 63 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-44

ICS C08F291-00; C08K005-00; C08L101-00; G02F001-361; G03F007-004;  
G11B007-24; C09B023-00

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38, 41, 73

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004346238	A	20041209	JP 2003-146527	20030523
	US 2004245432	A1	20041209	US 2004-849519	20040520
PRAI	JP 2003-146527	A	20030523		
	JP 2003-312744	A	20030904		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004346238	ICM	C08F002-44
	ICS	C08F291-00; C08K005-00; C08L101-00; G02F001-361; G03F007-004; G11B007-24; C09B023-00
	IPCI	C08F0002-44 [ICM,7]; C08F0291-00 [ICS,7]; C08K0005-00 [ICS,7]; C08L0101-00 [ICS,7]; G02F0001-361 [ICS,7]; G02F0001-35 [ICS,7,C*]; G03F0007-004 [ICS,7]; G11B0007-24 [ICS,7]; C09B0023-00 [ICS,7]
	IPCR	C08F0002-44 [I,A]; C08F0002-44 [I,C*]; C08F0291-00 [I,A]; C08F0291-00 [I,C*]; C08K0005-00 [I,A]; C08K0005-00 [I,C*]; C08L0101-00 [I,A]; C08L0101-00 [I,C*]; C09B0023-00 [N,A]; C09B0023-00 [N,C*]; G02F0001-35 [I,C*]; G02F0001-361 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G11B0007-24 [I,A]; G11B0007-24 [I,C*]
	FTERM	2H025/AA01; 2H025/AB14; 2H025/AC08; 2H025/AD01; 2H025/BC13; 2H025/BC51; 2H025/BD03; 2H025/BH05; 2H025/CA00; 2H025/CA41; 2H025/CA48; 2H025/CB04; 2H025/CB07; 2H025/CB41; 2K002/AA01; 2K002/AB40; 2K002/BA01; 2K002/CA06; 2K002/HA16; 4H056/CA01; 4H056/CA02; 4H056/CA05; 4H056/CB01; 4H056/CC02; 4H056/CC04; 4H056/CC08; 4H056/CD05; 4H056/CE02; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/DD06; 4H056/DD16; 4H056/DD19; 4H056/DD23; 4H056/DD29; 4J002/AB021; 4J002/BC021; 4J002/BC111; 4J002/BC121; 4J002/BD121; 4J002/BE021; 4J002/BE061; 4J002/BF021; 4J002/BG021; 4J002/EL126; 4J002/ET006; 4J002/EU026; 4J002/EU116; 4J002/EU126; 4J002/EU136; 4J002/EU226; 4J002/EV306; 4J002/EV326; 4J002/FD096; 4J002/GS02; 4J011/AC04; 4J011/PA53; 4J011/PA66; 4J011/PA67; 4J011/PA68; 4J011/PB40; 4J011/PC02; 4J011/PC08; 4J026/AA02; 4J026/AA26; 4J026/AA30; 4J026/AA34; 4J026/AA38; 4J026/AC36; 4J026/BA05; 4J026/BA08; 4J026/BA27; 4J026/BA28; 4J026/BA29; 4J026/BA30;

4J026/BA40; 4J026/DB06; 4J026/DB15; 4J026/DB36;  
4J026/FA05; 4J026/GA09; 5D029/JA04; 5D029/JB11;  
5D029/JC17

US 2004245432 IPCI H01L0027-00 [ICM,7]  
IPCR H01L0027-00 [I,A]; H01L0027-00 [I,C\*]  
NCL 250/208.100; 257/E27.133; 430/336.000  
ECLA H01L027/146F

OS MARPAT 142:45976

AB The compns. comprise (A) \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing compds.  
(e.g., methine dyes, phthalocyanine dyes, merocyanine dyes, \*\*\*oxonol\*\*\*  
dyes), (B) (radical- or acid-generating) polymn. initiators, (C)  
(radically or cationically polymerizable) monomers, and (D) binders. For  
modulation of refractive index, the compns. are photopolymd. by  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption induced by laser irradiation at linear  
absorption-free wavelength which is longer than linear absorption bands of  
A. After the irradiation, compn. ratio of C and C polymers to D in the  
compns. is unequalized between at focal regions and at the other regions,  
allowing the refractive index modulation and three-dimensional optical  
recording.

ST nonresonant \*\*\*two\*\*\* \*\*\*photon\*\*\* absorption three dimensional  
photopolymn; cyanine merocyanine \*\*\*oxonol\*\*\* dye \*\*\*two\*\*\*  
\*\*\*photon\*\*\* absorption; laser irradiation nonlinear refractive index  
modulation; optical recording refractive index laser photopolymn  
disproportionation; \*\*\*two\*\*\* \*\*\*photon\*\*\* absorption three  
dimensional optical recording

IT Polysiloxanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Me Ph, binders; polymerizable compns. showing nonresonant \*\*\*two\*\*\*  
- \*\*\*photon\*\*\* absorption for three-dimensional refractive index  
modulation and optical recording)

IT Polymerization catalysts  
(acid-generating; polymerizable compns. showing nonresonant \*\*\*two\*\*\*  
- \*\*\*photon\*\*\* absorption for three-dimensional refractive index  
modulation and optical recording)

IT Fluoropolymers, uses  
Polyvinyl butyrals  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binders; polymerizable compns. showing nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* absorption for three-dimensional refractive index  
modulation and optical recording)

IT Polyvinyl acetals  
RL: TEM (Technical or engineered material use); USES (Uses)  
(formals, binders; polymerizable compns. showing nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional  
refractive index modulation and optical recording)

IT Optical recording  
(laser, three-dimensional; polymerizable compns. showing nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional  
refractive index modulation and optical recording)

IT \*\*\*Two\*\*\* - \*\*\*photon\*\*\* absorption  
(nonlinear, nonresonant; polymerizable compns. showing nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional  
refractive index modulation and optical recording)

IT Dyes  
(org.; polymerizable compns. showing nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* absorption for three-dimensional refractive index  
modulation and optical recording)

IT Polymerization  
(photopolymn.; polymerizable compns. showing nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* absorption for three-dimensional refractive index  
modulation and optical recording)

IT Cyanine dyes  
(polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\*  
absorption for three-dimensional refractive index modulation and  
optical recording)

IT Polymerization catalysts  
(radical; polymerizable compns. showing nonresonant \*\*\*two\*\*\* -  
\*\*\*photon\*\*\* absorption for three-dimensional refractive index  
modulation and optical recording)

IT Optical modulation  
(refractive index; polymerizable compns. showing nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional



refractive index modulation and optical recording)

IT Nonlinear optical absorption  
( \*\*\*two\*\*\* - \*\*\*photon\*\*\* , nonresonant; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 9002-89-5, Poly(vinyl alcohol) 9003-20-7, Poly(vinyl acetate)  
9003-53-6, Polystyrene 9004-36-8, CAB  
RL: TEM (Technical or engineered material use); USES (Uses)  
(binders; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 574-93-6, Phthalocyanine  
RL: TEM (Technical or engineered material use); USES (Uses)  
(dyes; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 54443-93-5P 66142-15-2P 88253-66-1P 88340-89-0P 681836-46-4P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(in prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing dyes; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 67-52-7, Barbituric acid 115-80-0, Triethyl orthopropionate 120-92-3, Cyclopentanone 504-17-6, Thiobarbituric acid 927-63-9 1120-71-4, Propanesultone 1497-49-0 4485-89-6 4637-24-5 29636-96-2 61931-68-8 165547-54-6 398522-14-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing dyes; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 307-98-2 1484-13-5 1675-54-3, Bisphenol a diglycidyl ether 2386-87-0 3530-36-7 3741-77-3 18724-32-8 52684-34-1  
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(monomers; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 25085-98-7P 25085-99-8P, Bisphenol a diglycidyl ether homopolymer 26337-50-8P 34558-43-5P 121225-97-6P 805231-70-3P 805231-71-4P 805231-72-5P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polymers; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 20444-09-1 57840-38-7, Triphenylsulfonium hexafluoroantimonate 58109-40-3, Diphenyliodonium hexafluorophosphate 120307-06-4 125407-19-4 132838-87-0 153148-27-7 442199-78-2  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(polymn. initiators; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 805231-69-0 805244-72-8  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
( \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing dyes, polymn. initiators; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 33628-03-4P 78902-42-8P 681836-47-5P 718636-60-3P 774216-84-1P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
( \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing dyes; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for three-dimensional refractive index modulation and optical recording)

IT 52560-25-5 680232-65-9 718636-62-5 718636-63-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
( \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing dyes; polymerizable compns. showing nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* absorption for

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2004:305221 CAPLUS <<LOGINID::20061218>>  
 DN 140:347135  
 ED Entered STN: 15 Apr 2004  
 TI Nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing material, nonresonant  
 \*\*\*two\*\*\* - \*\*\*photon\*\*\* -emitting material, and methods for inducing  
 absorption or generating nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\*  
 emission by using the material  
 IN Takizawa, Hiroo; Tani, Takeharu; Morinaga, Naoki  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Eur. Pat. Appl., 46 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G02F001-361  
 ICS G03F007-00  
 CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related  
 Properties)  
 Section cross-reference(s): 41, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1408366	A2	20040414	EP 2003-22697	20031007
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2004279794	A	20041007	JP 2003-71874	20030317
	JP 2004279795	A	20041007	JP 2003-71875	20030317
	JP 2004149517	A	20040527	JP 2003-337029	20030929
	US 2004086803	A1	20040506	US 2003-678301	20031006
	JP 2005025152	A	20050127	JP 2003-351665	20031010
PRAI	JP 2002-293720	A	20021007		
	JP 2003-65580	A	20030311		
	JP 2003-71874	A	20030317		
	JP 2003-71875	A	20030317		
	JP 2003-168028	A	20030612		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1408366	ICM	G02F001-361
	ICS	G03F007-00
	IPCI	G02F0001-361 [ICM,7]; G02F0001-35 [ICM,7,C*]; G03F0007-00 [ICS,7]
	IPCR	G02F0001-35 [I,C*]; G02F0001-361 [I,A]; G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-20 [I,A]; G03F0007-20 [I,C*]
JP 2004279794	ECLA	G02F001/361B2; G02F001/361D2; G03F007/00S; G03F007/20S2
	IPCI	G02F0001-361 [ICM,7]; G02F0001-35 [ICM,7,C*]; C09K0011-06 [ICS,7]; C09B0023-00 [ICS,7]
	IPCR	C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; G02F0001-35 [I,C*]; G02F0001-361 [I,A]
	FTERM	2K002/AB12; 2K002/BA01; 2K002/CA05; 2K002/GA07; 2K002/HA13; 4H056/CA01; 4H056/CC02; 4H056/CC04; 4H056/CC08; 4H056/CD04; 4H056/CD08; 4H056/CD09; 4H056/CE01; 4H056/CE03; 4H056/CE06; 4H056/DD06; 4H056/DD07; 4H056/DD12; 4H056/DD16; 4H056/DD19; 4H056/DD23; 4H056/DD28; 4H056/DD29
JP 2004279795	IPCI	G02F0001-361 [ICM,7]; G02F0001-35 [ICM,7,C*]; C09K0011-06 [ICS,7]; C09B0023-00 [ICS,7]
	IPCR	C09B0023-00 [N,A]; C09B0023-00 [N,C*]; C09K0011-06 [I,A]; C09K0011-06 [I,C*]; G02F0001-35 [I,C*]; G02F0001-361 [I,A]
	FTERM	2K002/AB12; 2K002/BA01; 2K002/CA06; 2K002/HA19; 4H056/CA02; 4H056/CC04; 4H056/CC08; 4H056/CD08; 4H056/CD09; 4H056/CD12; 4H056/CE01; 4H056/CE03; 4H056/CE06; 4H056/DD03; 4H056/DD04; 4H056/DD06; 4H056/DD07; 4H056/DD12; 4H056/DD16; 4H056/DD19; 4H056/DD23; 4H056/DD28; 4H056/DD29; 4H056/FA10
JP 2004149517	IPCI	C07C0049-683 [ICM,7]; C07C0049-00 [ICM,7,C*]; C07C0255-34 [ICS,7]; C07C0255-00 [ICS,7,C*];

C07C0309-14 [ICS,7]; C07C0309-00 [ICS,7,C\*];  
 C07D0263-56 [ICS,7]; C07D0263-00 [ICS,7,C\*];  
 C07D0277-64 [ICS,7]; C07D0277-00 [ICS,7,C\*];  
 C07F0001-08 [ICS,7]; C07F0001-00 [ICS,7,C\*];  
 C07F0003-02 [ICS,7]; C07F0003-06 [ICS,7]; C07F0003-00  
 [ICS,7,C\*]; C09K0011-06 [ICS,7]; G02F0001-361 [ICS,7];  
 G02F0001-35 [ICS,7,C\*]  
 IPCR C07C0049-00 [I,C\*]; C07C0049-683 [I,A]; C07C0255-00  
 [I,C\*]; C07C0255-34 [I,A]; C07C0309-00 [I,C\*];  
 C07C0309-14 [I,A]; C07D0263-00 [I,C\*]; C07D0263-56  
 [I,A]; C07D0277-00 [I,C\*]; C07D0277-64 [I,A];  
 C07F0001-00 [I,C\*]; C07F0001-08 [I,A]; C07F0003-00  
 [I,C\*]; C07F0003-02 [I,A]; C07F0003-06 [I,A];  
 C09K0011-06 [I,A]; C09K0011-06 [I,C\*]; G02F0001-35  
 [I,C\*]; G02F0001-361 [I,A]  
 FTERM 2K002/AB12; 2K002/BA01; 2K002/CA05; 2K002/HA13;  
 4C056/AA01; 4C056/AB01; 4C056/AC02; 4C056/AD03;  
 4C056/AE03; 4H006/AA01; 4H006/AA03; 4H006/AB92;  
 4H006/BJ50; 4H006/BN20; 4H006/BR70; 4H006/BU42;  
 4H006/BU46; 4H006/BU50; 4H006/NB00; 4H048/AA01;  
 4H048/AA03; 4H048/AB92; 4H048/VA32; 4H048/VA56;  
 4H048/VA60; 4H048/VA66; 4H048/VB10  
 US 2004086803 IPCI G11B0007-24 [ICM,7]  
 IPCR G02F0001-35 [I,C\*]; G02F0001-361 [I,A]; G03F0007-00  
 [I,A]; G03F0007-00 [I,C\*]; G03F0007-20 [I,A];  
 G03F0007-20 [I,C\*]  
 NCL 430/270.180; 428/064.800; 430/270.200; 430/945.000  
 ECLA G02F001/361B2; G02F001/361D2; G03F007/00S; G03F007/20S2  
 JP 2005025152 IPCI G02F0001-361 [ICM,7]; G02F0001-35 [ICM,7,C\*];  
 C09B0023-00 [ICS,7]; C09K0011-06 [ICS,7]  
 IPCR C09B0023-00 [I,A]; C09B0023-00 [I,C\*]; C09K0011-06  
 [I,A]; C09K0011-06 [I,C\*]; G02F0001-35 [I,C\*];  
 G02F0001-361 [I,A]  
 FTERM 2K002/AA07; 2K002/AB29; 2K002/BA01; 2K002/CA06;  
 2K002/GA07; 2K002/HA22; 4H056/CA01; 4H056/CA05;  
 4H056/CC02; 4H056/CC08; 4H056/CE03; 4H056/CE06;  
 4H056/DD03; 4H056/DD04; 4H056/DD06; 4H056/DD07;  
 4H056/DD15; 4H056/DD19  
 OS MARPAT 140:347135  
 AB Nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing materials are  
 described which comprise a methine dye or a dye in an intramol.  
 aggregation state. The methine dye is preferably a cyanine dye, a  
 merocyanine dye, or an \*\*\*oxonol\*\*\* dye. \*\*\*Two\*\*\* - \*\*\*photon\*\*\*  
 -emitting materials are also described which the \*\*\*two\*\*\* -  
 \*\*\*photon\*\*\* -absorbing materials. Methods for inducing \*\*\*two\*\*\* -  
 \*\*\*photon\*\*\* absorption and/or emission entailing irradiating the  
 materials with laser radiation are also described. Optical recording  
 media, three-dimensional vol. displays, and three-dimensional  
 stereolithog. are also described which employ the materials.  
 ST nonresonant \*\*\*two\*\*\* \*\*\*photon\*\*\* absorbing emitting material;  
 optical recording medium nonresonant \*\*\*two\*\*\* \*\*\*photon\*\*\*  
 absorbing emitting material; \*\*\*three\*\*\* dimensional display  
 \*\*\*two\*\*\* \*\*\*photon\*\*\* absorbing emitting material; stereolithog  
 \*\*\*two\*\*\* \*\*\*photon\*\*\* absorbing emitting material  
 IT Cyanine dyes  
 Dyes  
 Luminescent substances  
 Nonlinear optical materials  
 \*\*\*Two\*\*\* - \*\*\*photon\*\*\* absorption  
 (nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing and -emitting  
 materials and methods for inducing absorption or generating nonresonant  
 \*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using them and their use)  
 IT Optical recording materials  
 Stereolithography  
 (nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing and -emitting  
 materials and methods for inducing absorption or generating nonresonant  
 \*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using them and their use in)  
 IT Optical imaging devices  
 ( \*\*\*three\*\*\* -dimensional; nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\*  
 -absorbing and -emitting materials and methods for inducing absorption  
 or generating nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using  
 them and their use in)

IT 67-52-7, Barbituric acid 115-80-0, Triethyl orthopropionate 273-53-0,  
Benzoxazole 504-17-6, Thiobarbituric acid 1120-71-4, Propane sultone  
4485-89-6 5608-83-3 29636-96-2 680232-64-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing and -emitting  
materials and methods for inducing absorption or generating nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using them and their use)

IT 54443-93-5P 66142-15-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing and -emitting  
materials and methods for inducing absorption or generating nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using them and their use)

IT 33628-03-4P 78902-42-8P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing and -emitting  
materials and methods for inducing absorption or generating nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using them and their use)

IT 14846-12-9 32976-69-5 40387-89-1 55935-20-1 65294-02-2  
72076-49-4 102731-88-4 111545-69-8 115310-99-1 183272-14-2  
308116-42-9 308116-44-1 337963-09-4 455329-63-2 680232-65-9  
680232-66-0 680232-68-2 680232-69-3 680232-71-7 680232-73-9  
680232-75-1 680232-77-3 680232-78-4 680232-79-5 680232-80-8  
680232-81-9 680232-83-1 680232-84-2 680232-85-3 680232-87-5  
680232-89-7 680232-90-0 680232-91-1 680232-92-2 680232-94-4  
680232-95-5 680232-96-6 680233-01-6 680233-02-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(nonresonant \*\*\*two\*\*\* - \*\*\*photon\*\*\* -absorbing and -emitting  
materials and methods for inducing absorption or generating nonresonant  
\*\*\*two\*\*\* - \*\*\*photon\*\*\* emission using them and their use)

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(FILE 'HOME' ENTERED AT 16:40:40 ON 18 DEC 2006)

FILE 'CAPLUS, INSPEC' ENTERED AT 16:40:56 ON 18 DEC 2006

L1 985 S OXONOL  
L2 76352 S ((TWO OR MULTI OR THREE OR BI) (4W) PHOTON?) OR BIPHOTON? OR MU  
L3 6 S L1 AND L2

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	35.68	35.89
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-4.50	-4.50

STN INTERNATIONAL LOGOFF AT 16:42:23 ON 18 DEC 2006